

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method for a inventory management system to receive an electronic order from a registered user to either send user specified material to a connected warehouse or to extract
5 a user specified material from the said warehouse, further triggering the said system to compute and output the current cost of the order by calculating the freight and carriage costs associated with the said order.
2. A method as claimed in claim 1, including allowing the user to define to the inventory management system to calculate the associated freight and carriage costs according to the
10 user's preference in a predetermined budget range being stored within the said system
3. A method for a inventory management system to be connected to at least 1 warehouse allowing the user of the said system to electronically send an order to trigger a retrieval of a user specified inventory item for shipment to a user specified destination according to a user specified budget for the shipment costs associated with the said triggered activity
- 15 4. A method for a inventory management system to be connected to at least 1 warehouse allowing the user of the said system to electronically send an order to trigger an acceptance and shipment of incoming, user specified inventory from a user specified location according to a user specified budget for the shipment costs associated with the said triggered activity
5. A method for a computer implemented process where registered users within a inventory management system can input inventory quantity incoming to a connected warehouse or
20 inventory quantity outgoing from a connected warehouse, further allowing the said system to generate a estimate of costs associated with the user's input in a suitable electronic file format
6. A method as claimed in claim 5, where the inventory management system is electronically

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connected to a TCP/IP based network bearing the freight, insurance and transportation costs of a predetermined list of vendor rates being updated within a predetermined time cycle stored within the said system

- 5 7. A method for a processor to be electronically connected to a warehouse, accepting electronic data to update and record the total stock of inventory items into a suitable electronic file format, comparing with any input of orders made by any registered user of the said processor, and subtracting or adding the order quantity to the said total stock value within a predetermined time cycle stored within the said processor

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8. A method for determination of the total combined value of a plurality of inventory from multiple inventory hubs to a single physical location where said determination is to be implemented via a electronic communications network comprising of the following steps;
Single physical location to send a pull signal to a plurality of registered or predetermined inventory hubs via a connected communications network;
Said network to transmit said signal using TCP/IP as the carrier format and XML, HTML, ASCII text, digital binary bits as the primary data format;
Said signal may include additional instructions where the manner of which each predetermined inventory, inventory lot, inventory SKU, material part number, material lot number, material code number is to be merged at a particular physical transit point, or how said instructions will determine the manner by which a plurality of inventory material is to be merged into a single assembled or semi-assembled collection of inventory prior to physical delivery to a ultimate physical destination hub
9. A system for implementing an electronic communications network designed for the purposes of collecting the rates, prices and other transactional details relating to shipping, transportation and freight agents/parties, storing said data into a database connected to the said network, comparing said database to a plurality of electronic requests for quotation of the said shipping, transportation and freight details by any registered user of the said network, and finally computing and matching the said request to one or more optimized quotation answers
10. A system as claimed in claim 9, where said electronic requests are structured with multiple parameters of which each registered user can elect in order to determine the manner by which the said network will communicate with the said database in order to arrive at one or more optimized quotation request answers
11. A system as claimed in claims 9 and 10, where said electronic requests are structured to allow each registered user to elect the manner by which the said network can communicate with the said database in order to arrive at one or more optimized quotation request answer, either by the lowest cost, best or fastest performance or delivery, medium cost with medium performance or delivery, or service agent with a predetermined level of experience, lowest cost of insurance, greatest cost of insurance, best cost for a elected level of performance or delivery, best cost for a elected level of performance or delivery within a user specified variance
12. A system for a singular material hub to be present in the domain of an electronic network,

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where the said hub may comprise of separate and distinct physical locations which may be unknown to a registered user of the said network, for the purpose of reducing material transport routing and planning requirements by the said user

- 5 13. A system for a singular material hub to be present within an electronic communications network that is connected to at least one supply chain intermediary, allowing the said intermediary to present to a plurality of registered users of the said hub a singular point of sending inventory materials for storage, transit, warehousing, merging, stocking, distribution, assembly, manufacture, processing, shipment and/or transport, where said hub may physically be composed of more than one geographical location, which may be unknown to
10 the said user, for the purposes of reducing route and related material planning requirements by the said user
14. A system for a inventory material hub to accept material input from a plurality of auxiliary physical storage units for the purpose of providing by means of the said hub, a staging area for the said material from the said units to be assembled or be packed or processed into a
15 single package for routing to a final location by which the flow of the said method shall be governed by a series of instructions that are unique and are carried over a uniform electronic communications network between the said hub, said storage units and the said final location
15. A method as claimed in claim 14, where said instruction will include a routing number, routing SKU and routing code of which the said information shall be processed by a
20 designated processor in accordance with a stored set of electronic parameters within a connected database
16. A method as claimed in claims 14, 15, where said instruction will use the routing code or another alternative data set to determine the total quantity of each material SKU that is predetermined to arrive at the said material hub, and compare to the total cumulative SKU
25 quantity required for each designated assembled or processed packaged that is to be routed to the said final location
17. A method as claimed in claim 16, where a designated processor shall determine and calculate the total quantity required for each of the said material SKU that is to arrive at the said material hub, in order to fulfil the total cumulative SKU quantity required for each
30 designated assembled or processed package that is to be routed to the said final location
18. A method as claimed in claims 14, 15, 16, 17, where any excess quantity of material to arrive at the said material hub shall be deemed not critical and be tagged by the communications network for either storage at the said material hub, re-routing back to its original place of shipment, or be tagged for stoppage prior to shipment to the said material hub

19. A method and apparatus for an electronic network to be connected to a plurality of material hubs, where each said material hub shall comprise of at least one processor and authentication unit, for the purposes of allowing a physical delivery of material, goods or inventory moved from one said hub to another to be authenticated and be confirmed between the recipient of the recipient material hub and the sending party of the other material hub by means of a portable electronic device capable of accepting the said authentication and delivery confirmation, of which the said device is also connected to the said communications network
20. A method and apparatus as claimed in claim 19, where the said delivery confirmation and authentication can be implemented on the said device where the physical delivery of material begins from one registered material hub and ends at a location that is not a material hub but is a designated location of delivery that is agreed between the sender of the said material and the recipient of the said material
21. A method and apparatus as claimed in claim 19, 20, where the recipient of the said material do not need to operate or be equipped with an authentication and confirmation processor unit
22. A system as claimed in claim 5, where the electronic procurement and inventory management system shall comprise of the following;
- Operator and controller of communications network within the said system;
- A registered user having an unique electronic identity stored on the said network;
- Each said user having the means to operate the said system by inputting inventory material forecast levels of consumption;
- Each said user having the means to operate the said system by inputting multiple instances of the said user's expected or forecasted quantity of materials that is required;
- Said system allowing the said expected quantity to be transmitted to a designated number of related parties (other users) for triggering of an action;
- Said system allowing each related party to view the expected forecast quantity that relates to the specific range of materials that the said party had been assigned by the first user to supply;
- Said system allowing the said party to trigger shipment and delivery of the said specific range of materials and the actual quantity the said party is able to fulfil;
- Said system enabling to trigger a overview report and shortage notification message to the first said user upon consolidation from any number of registered said parties who had

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provided with a shipment, delivery and quantity response

23. A system for an electronic procurement and inventory management application that is processor-implemented over an electronic communications network, for the purposes of allowing input of specific manufacturing procurement and material requirement data from 1 or more client user, and sending said data to a range of client suppliers related and registered to the said user, receiving from the said suppliers appropriate responses, and generating a consolidated reporting file that provides the said client user with information relating to the overall ability of the said client user to fulfil the total procurement and material requirement as originally input by the said client user

24. A system as claimed in claim 23, where said system shall also allow client user to input the total quantity of finished or processed or manufactured items that is demanded within a client-specified time schedule

25. A system as claimed in claims 23, 24, where said system shall store the total quantity as input from the said client user, and perform a database look-up in order to retrieve all registered part or component suppliers that are required in order to allow the said client's demand of a specific quantity of finished item to be fulfilled

26. A system as claimed in claims 23, 24, and 25, where said system shall retrieve all sub-component items required for each said supplier and calculate the total quantity that is required of each said supplier in order to fulfill the said client's demand

27. A system as claimed in claims 23, 24, 25, 26, where said system will allow each said supplier to return an electronic response as to the availability of the said supplier's components

28. A system as claimed in claims 23, 24, 25, 26, 27, where said system shall receive all said supplier's responses via the said electronic communications network, and match the said responses to a connected database to calculate and derive a total possible quantity of finished items that can be supplied to the said client user

29. A system for an inventory processing unit to accept electronic rules from a registered device and/or user, making use of the said rules to determine the manner by which a specific quantity of inventory material should be stored at a plurality of physical storage locations

30. A system for an inventory processing unit to perform electronic control and inventory administration comprising the following steps;

Displaying to a plurality of registered users a single storage facility,

Having the inventory processing unit be connected to a plurality of storage facilities,

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Having the said unit display only a single storage facility regardless of the actual number of physical storage facilities having being connected to the said unit,

Displaying and allowing inventory control and administration to be performed, managed and operated via the said single displayed facility to a registered user or a plurality of said users.

5 31. A system for an inventory processing unit to be electronically connected to a plurality of warehouses and/or storage facilities, further displaying in a suitable form to a plurality of users a single warehouse representing the total stock of all inventory physically present from all said connected warehouses.

10 32. A system as claimed in claims 30 and 31, where said inventory processing unit will display a single warehouse to at least 1 user, allowing the said user to activate and operate the movement and control of inventory material

15 33. A system for an inventory processing unit to be electronically connected to a plurality of warehouses and/or storage facilities, allowing said unit to record the individual inventory material details and quantity from each said warehouses, further displaying to at least 1 user the total consolidated detail and quantity from the said warehouses

34. A system as claimed in claim 33, where said unit displays to the said user a single representation of a warehouse irregardless of the actual number of warehouses actually being connected to the said unit

20 35. A system for an inventory processing unit to be electronically connected to a plurality of warehouses and/or storage facilities, allowing said unit to record the individual inventory material details and quantity from each connected warehouse, presenting and displaying to at least 1 user the total detail and quantity derived from all said connected warehouses

25 36. A system for an inventory processing unit to receive electronic orders from at least 1 user of the said unit, to move and/or control the movement of a specified quantity and detail of inventory material from a single designated storage hub being displayed to the said user, to a user designated destination, comprising the following steps;

Inventory processing unit displaying to user a single designated storage hub,

Inventory processing unit being connected to a plurality of storage hubs,

30 Inventory processing unit accepting an electronic order from the user to move a specific quantity of a designated inventory material type to a user specified destination

Inventory processing unit polling the said connected hubs the total quantity of inventory material being designated by the user that is available

Creating and generating a list detailing the quantity of designated inventory material to extract from each said connected hub to match the said order being given by the said user to the inventory processing unit

5 37. A system for an inventory processing unit to be connected to a plurality of warehouses, allowing to display to a registered user a single designated virtual warehouse, further allowing the said user to activate via the single virtual warehouse the movement of a user specified inventory item and its related quantity

10 38. A system as claimed in claim 37, where said virtual warehouse receives an electronic order from a user to move a specific quantity and type of inventory item from the said virtual warehouse to a user designated destination, comprising of the following steps;

Receiving an electronic order from the said user;

Polling all connected physical warehouses to get the quantity of the specified inventory item available;

15 Generating and sending to each said physical warehouses the individual, incremental quantity to extract to match the said electronic order

39. A system for a inventory processing unit to be connected electronically to a series of designated warehouses, further displaying the contents of each individual warehouse into a single, consolidated virtual warehouse to a registered user

20 40. A system for a inventory processing unit to be connected electronically to a series of designated warehouses, displaying a consolidated view of the contents of all said warehouses into a single virtual warehouse to a user, further allowing the user to activate the movement of a specified inventory item of a specified quantity without the knowledge of the individual quantity available at each of the individual designated warehouses

25 41. A system for a inventory processing unit to be connected electronically to a series of designated warehouses, allowing a designated user to operate and control predetermined inventory items at any of the said warehouses via a single virtual warehouse identity being displayed to the said user

30 42. A system for a inventory processing unit to be connected electronically to a series of designated warehouses, allowing a designated user to operate, control and assign ownership rights of a predetermined inventory item range at any of the said warehouses via a single virtual warehouse identity and/or object being displayed to the said user

43. A system for a inventory processing unit to be connected electronically to a series of

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designated warehouses, displaying a predetermined range of inventory items from each individual warehouse into a single virtual warehouse identity and/or object to a user

5 44. A system as claimed in claim 43, where said user may be given authorization to send to the inventory processing unit electronic orders to transfer, move or stock a user specified quantity and type of inventory item from the displayed virtual warehouse to a user specified destination

10 45. A system as claimed in claims 29 to claims 44, where a user may also input to the inventory processing unit an order to receive a user specified quantity and type of inventory items from any external location not connected to the virtual warehouse identity for storage into any of the connected physical warehouses to the said virtual warehouse

15 46. A system as claimed in claims 29 to claims 44, where a user may also input to the inventory processing unit an order to store a user specified quantity and type of inventory items from a user specified location into the virtual warehouse, further triggering the inventory processing unit to determine the incremental quantity of incoming said items to store at each of the connected physical warehouses

47. A system for a inventory processing unit to be connected electronically to a series of warehouses in multiple geographical locations, displaying to a user a single virtual warehouse identity that is a representation of the said connected warehouses

20 48. A system for a inventory processing unit to be connected electronically to a series of warehouses in multiple geographical locations, displaying to a user a single virtual warehouse identity that is a representation of the said connected warehouses, further allowing the user to send orders to the inventory processing unit to either extract or store a user specified quantity and type of inventory item

25 49. A system as claimed in claim 48, where the inventory processing unit may also request from the user to specify any additional storage rules or parameters other than the order to either stock up or pare down a user specified inventory item

50. A system as claimed in claim 49 where the inventory processing unit will make use of the said rules or parameters being input to determine the manner by which individual quantities to be stocked or extracted from each said connected warehouses are implemented

30 51. A method and apparatus for a inventory management system to be electronically connected to a plurality of warehouses, allowing the said system to also receive the status information from each said warehouse of its contents, further allowing the system to display the collective content information and its related data to a single electronic entity termed a virtual

warehouse and/or hub

52. A method and apparatus for a inventory management system to be electronically connected to a plurality of warehouses, allowing the said system to also receive the status information from each said warehouses, further allowing the said system to display to a plurality of users a single virtual hub and/or warehouse that reflects the collective information and/or data that is a representation of the said connected warehouses

53. A method and apparatus for a inventory management system to be electronically connected to a plurality of warehouses, allowing the said system to display the collective information and/or data derived from the said connected warehouses to a single representation of a virtual material hub and/or warehouse

54. A method and apparatus as claimed in claims 51 to 53, where the inventory management system receives an electronic order from a user to receive inventory material from a user specified location into the virtual warehouse

55. A method and apparatus as claimed in claims 51-54, where upon receiving the said electronic order from the user, the inventory management system will electronically generate the individual quantity of the said material to be stocked at each system designated warehouse dependent on a stored set of computer driven rules and parameters within the said inventory management system

56. A method and apparatus as claimed in claims 51 to 53, where the inventory management system receives an electronic order from a user to extract user specified inventory material from the virtual warehouse to a user specified location

57. A method and apparatus as claimed in claim 56, where upon receiving the said electronic order from the user, the inventory management system will electronically generate the individual quantity of the said material to be extracted at each system designated warehouse dependent on a stored set of computer driven rules and parameters within the said inventory management system

58. A system as claimed in claims 51 to 57, where the inventory management system will poll from all its connected warehouses on the availability of warehousing space and/or user specified inventory material stock levels prior to generating a list of said connected warehouses where further stock extraction, and/or stock loading will be executed

59. A system as claimed in claims 51 to 58, where the inventory management system will generate a list of said connected warehouses that are targeted by the said system for further action depending on the stored parameters within the said system

60. A system as claimed in claim 59, where the inventory management system will further generate an electronic order to each said targeted warehouses on the said generated list to either receive (stock up) or extract (draw down) a user specified inventory item, quantity, and supplementary data including SKU, serial numbers, volumetric data, ISO identification tags, RFID numbers, product dimension data

61. A method and apparatus for a plurality of warehouses and its inventory items to be electronically connected to a computer driven computer application allowing said application to display the consolidated item details and quantity into a single electronic representation of a virtual warehouse to a user of the said application, further allowing the said user to perform inventory operations comprising of the following steps;

Allowing user to instruct the said application to extract a user specified quantity, type and detail of inventory item from the displayed virtual warehouse to a user specified destination and/or a plurality of user specified destinations,

Accepting the user instruction, having the computer application poll the cumulative total and relevant individual inventory item level available from each connected warehouse,

Comparing and computing if the user instructed quantity is below the said cumulative total available from all connected warehouses,

Generating a electronic list of individual quantity, detail and type of inventory item for extraction and shipment to a user specified destination/destinations from each connected warehouses

62. A method and apparatus for a plurality of warehouses and its inventory items to be electronically connected to a computer driven computer application allowing said application to display the consolidated item details and quantity into a single electronic representation of a virtual warehouse to a user of the said application, further allowing the said user to perform inventory operations comprising of the following steps;

Allowing user to instruct the said application to accept a user specified quantity, type and detail of inventory item from at least one user specified location for shipment and storage into the displayed virtual warehouse,

Accepting the user instruction, having the computer application poll all connected warehouses to the virtual warehouse for storage space availability,

Comparing and computing if the user instructed quantity and storage space requirement of inventory items for shipment and storage is below the cumulative total storage space available from all connected warehouses,

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Generating a electronic list of individual quantity, detail and type of inventory item for shipment and storage to each of the connected warehouses

- 5 63. A method as claimed in claim 61, where the computer application may store in memory a minimum level and/or quantity of a predetermined inventory item to be present and stocked at each connected warehouse, and performing an electronic calculation in order to derive the available quantity permissible for extraction, further sending this said available quantity to the said computer application during polling, comprising of the following calculation;

Where,

Total units stocked at warehouse (connected warehouse identification number Q) = X

10 Minimum units to maintain at warehouse (connected warehouse identification number Q) = Y

And,

Y subtracted from X to yield = K (Number of units to report to computer application that is available during polling)